



## **Modified Fat Diets**

### **Dietary Treatment of Hyperlipoproteinemia**

#### **General Description**

The dietary modifications recommended for lipid lowering diets vary depending on the specific lipoprotein abnormality. In general, the dietary recommendations for the various hyperlipoproteinemias are: achieve and maintain desirable body weight, control fat and cholesterol intake, and to eliminate or limit alcohol consumption.

#### **Indications for Use**

Treatment of hyperlipoproteinemia is undertaken to reduce the risk of atherosclerosis, particularly when the increased risk is associated with plasma lipid abnormalities<sup>2</sup>. Lipid-lowering therapy may also help reduce atherosclerosis risk primarily due to other disorders such as diabetes mellitus or hypertension by reducing the compounding effects of multiple risk factors. The goal of dietary treatment of hypertriglyceridemia is to lower triglycerides in an effort to prevent episodes of acute pancreatitis.

Dietary intervention is the primary approach to therapy in individuals with fasting blood triglyceride levels of 250 to 500 mg/dl. In frank hypertriglyceridemia (fasting triglycerides >500 mg/dl), lowering triglycerides by diet, and if necessary by drugs, is indicated<sup>3</sup>.

The first step in treatment of hypercholesterolemia is dietary intervention. Adults with blood cholesterol levels in the borderline high range (200-239 mg/dl) and high range (>240 mg/dl) should begin lipid-lowering diet<sup>1</sup>.

The various combinations of elevated lipoproteins that occur in disease states have been divided into six lipoprotein types. These types and the corresponding dietary management are summarized in Table 6.

#### **Nutritional Adequacy**

In comparison to the Recommended Dietary Allowances, this diet is nutritionally adequate with the same exceptions as for the regular diet.

## Dietary Treatment of Hyperlipoproteinemia

**Table 6: Dietary Management of Hyperlipoproteinemia<sup>4</sup>**

Lipoprotein Moiety Abnormality	Plasma Triglyceride Increased			Total Cholesterol Increased	Both Triglyceride and Cholesterol Increased
	<i>Type I</i> (*TG>1000)	<i>Type V</i> (*TG>1000)	<i>Type IV</i> (*TG 400-1000)	<i>Type IIa</i>	<i>Type IIb, III, IV</i> (*TG 150-400)
Attain and maintain ideal body weight	+	+	+	+	+
Fat content (% calories)	10-20%	10-20%	20-30%	30%	20-30%
Cholesterol intake (mg/d)	ND <sup>†</sup>	ND <sup>†</sup>	300	200-300	200-300
Alcohol intake (oz/d)	0	0	1	ND <sup>†</sup>	1
Carbohydrate (% calorie)	60-70%	60-70%	50-60%	50-55%	50-60%
Encourage reduction of mono and disaccharides (lactose, fructose, sucrose)	ND <sup>†</sup>	+	+	ND <sup>†</sup>	+
Encourage complex carbohydrates	+	+	+	+	+

\* TG indicates fasting Plasma Triglyceride values (mg/dl).

† ND indicates that this parameter is not specifically defined for this phenotype.

### References

1. Report of the Expert Panel on Detection, Evaluation and Treatment of High Blood Cholesterol in Adults. National Cholesterol Education Program, NHLBI, NIH, 1989.
2. Duffield R., Lewis B., Miller N.E., et al. Treatment of hyperlipidemia retards progression of symptomatic femoral atherosclerosis. *Lancet*, 2:639-642, 1983.
3. NIH Consensus Development Conference on Treatment of Hypertriglyceridemia. September, 1983.
4. Hoeg J., Gregg R., Brewer B. An approach to the management of hyperlipoproteinemia. *Journal of the American Medical Association*, 255 (4):512-521, 1986.